

Diagnostic Validity and Factor Analysis of Montgomery-Asberg Depression Rating Scale in Parkinson Disease Population

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• Abstract

- **Background:** The Montgomery-Asberg Depression Rating Scale (MADRS) is commonly used to assess major depression in Parkinson disease (PD), but studies on its utility are few. This study examines the validity and factor structure of MADRS in population with PD.
- **Methods:** In 104 patients with idiopathic PD, major depression was diagnosed by Diagnostic and Statistical Manual of Mental Disorders (Fourth Edition, Text Revision; DSM-IV-TR) criteria, and all patients were rated by MADRS.
- **Results:** The MADRS showed good concurrent validity with DSM-IV-TR criteria. The diagnostic cutoff was established as 16/17 (sensitivity 97.43, specificity 100%, positive predictive value 100%, and negative predictive value 98.48%). Factor analysis identified 3 factors, accounting for 76% of total variance: "sadness-anhedonia" comprising apparent sadness, reported sadness, concentration difficulties, lassitude, inability to feel, pessimistic thoughts, and suicidal ideas; "anxiety" with reduced sleep and inner tension; and "vegetative symptoms" with reduced appetite.
- **Conclusion:** The MADRS has diagnostic utility in major depression in PD. The 3-factor structure of MADRS may help to understand the different dimensions of major depression and identify distinct symptom subgroups in this population.